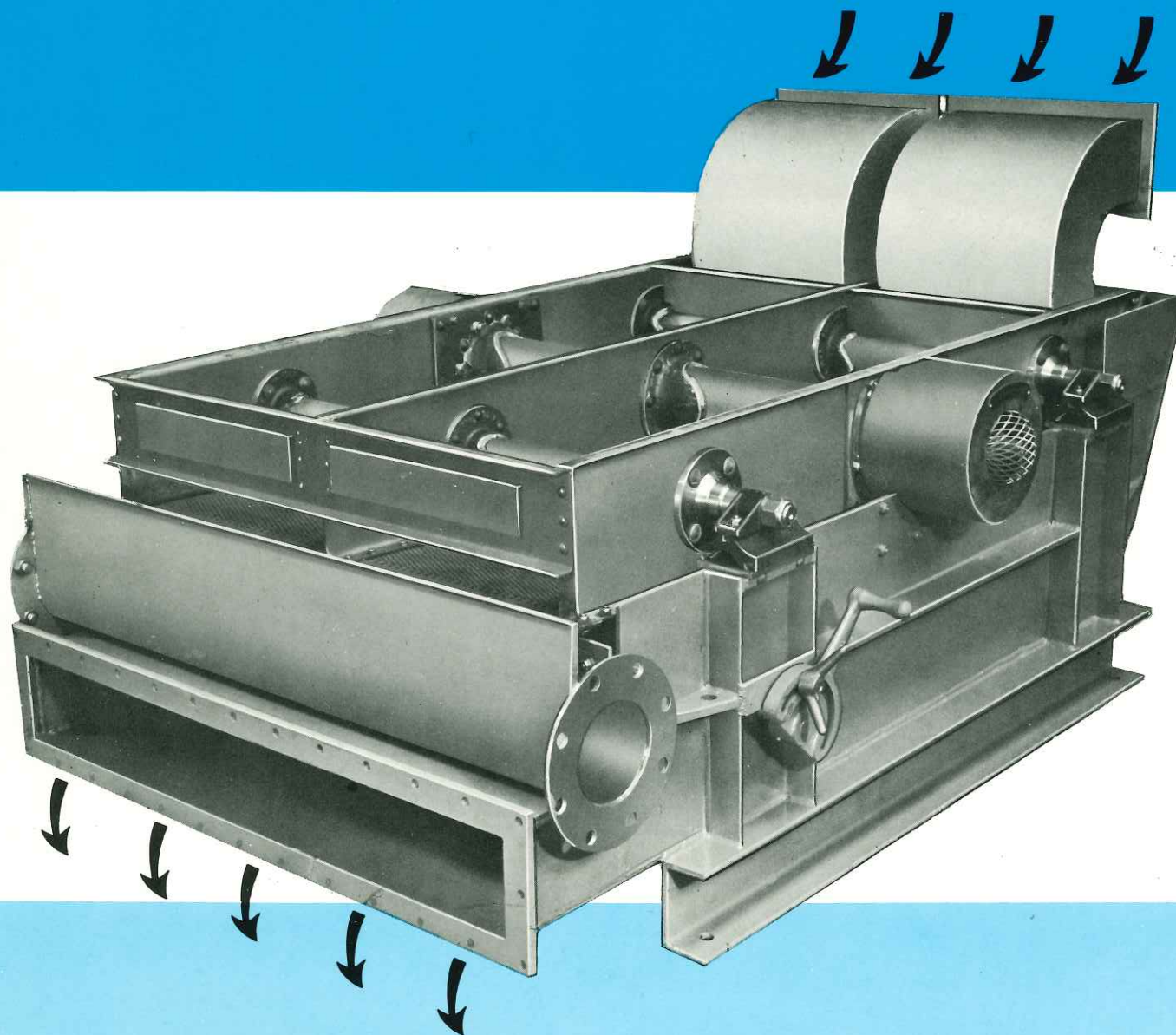


the
**BIRD JONSSON
SCREEN**

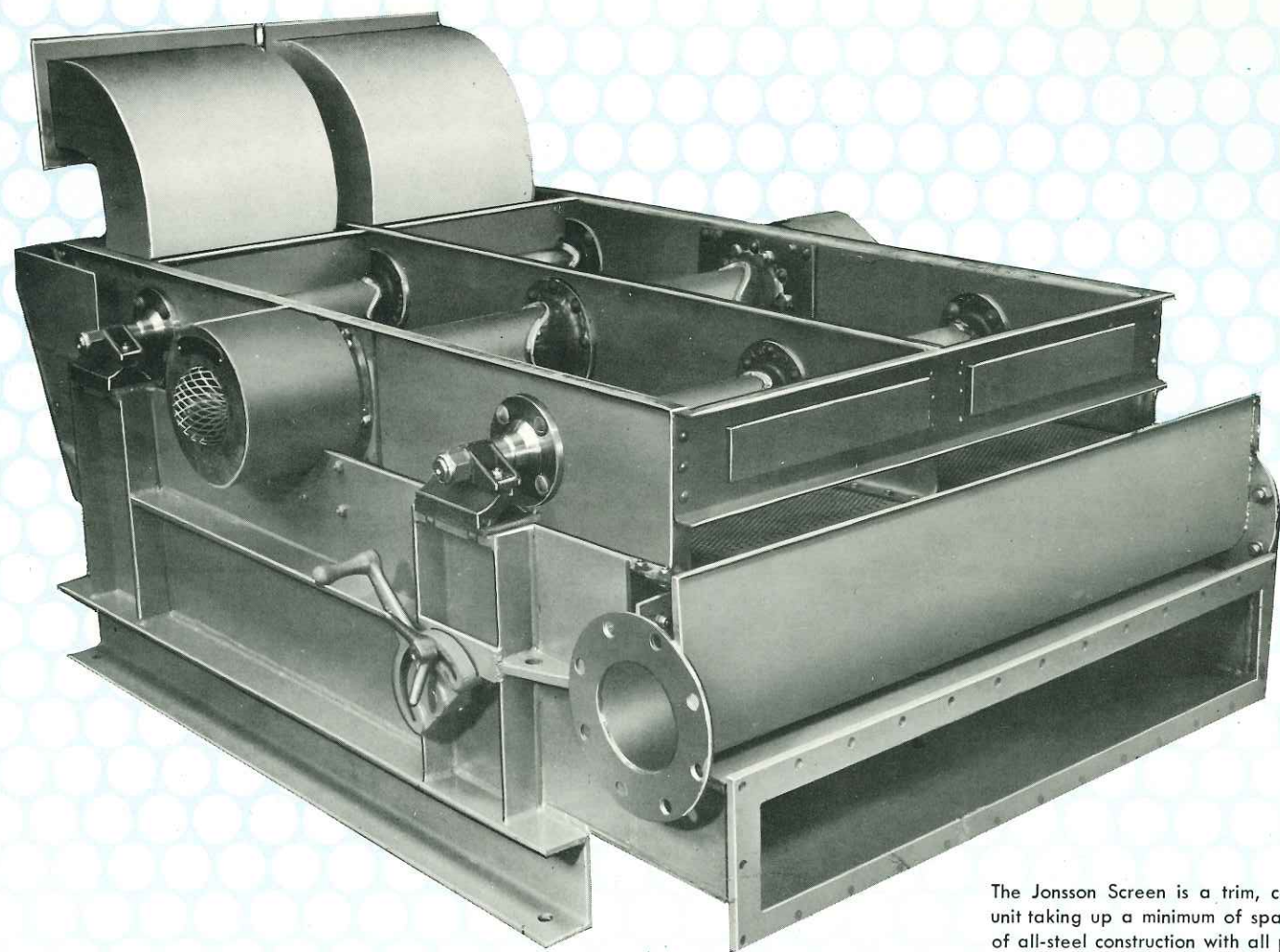
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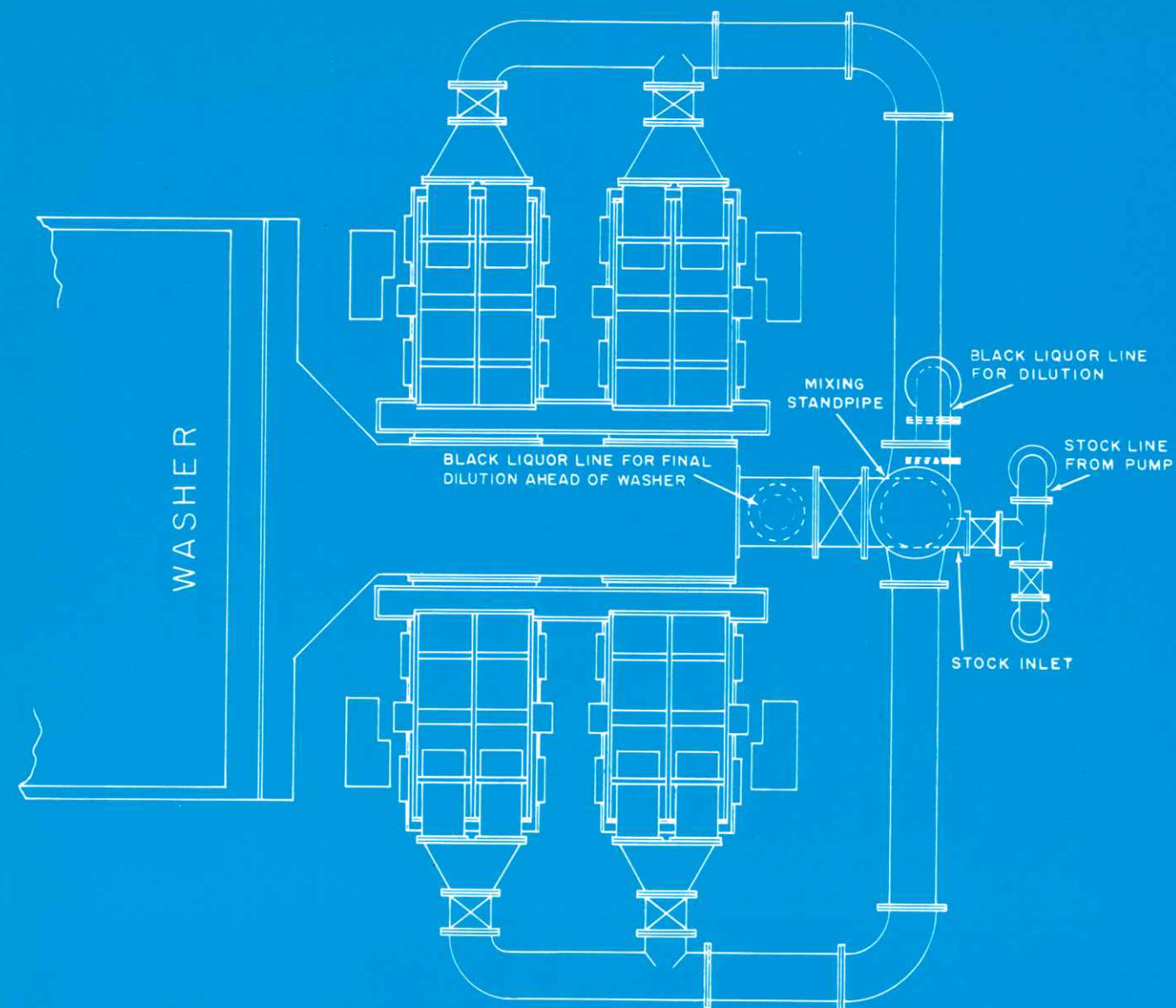
*For high capacity, high efficiency
knotting and perforate plate screening
at low screening cost per ton*



The Jonsson Screen is a trim, compact unit taking up a minimum of space. It is of all-steel construction with all parts in contact with the stock, including the screen plates, of stainless steel.

the BIRD JONSSON SCREEN

The Bird Jonsson Screen has firmly established itself as a broadly useful, economical and profitable piece of pulp and papermaking equipment. Over eleven hundred of these screens are now on the job in North American mills, screening all varieties and grades of pulp, board and waste stocks.



Showing the compact layout of four Jonsson Screens ahead of a brown stock washer.

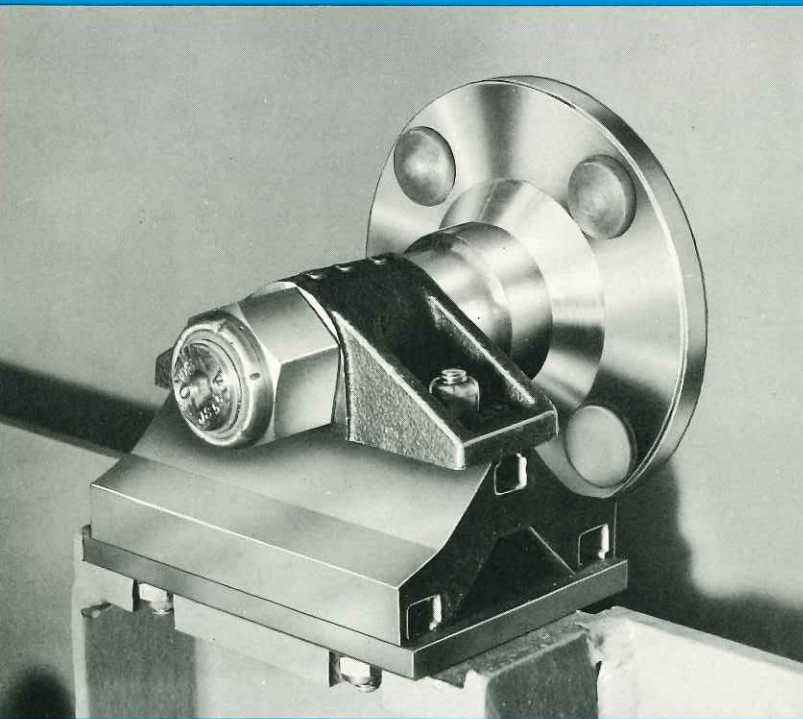
How it works

The Bird Jonsson Screen consists of an open trough or vat in which the perforate screen plates form the base or floor. The screen frame is resiliently suspended on channel mounts and is given a highly effective circular vibratory action by an off balance shaft, V-belt driven by a 3 HP motor. The channel mounts assure smooth, quiet operation. A minimum of vibration is transmitted to the foundation.

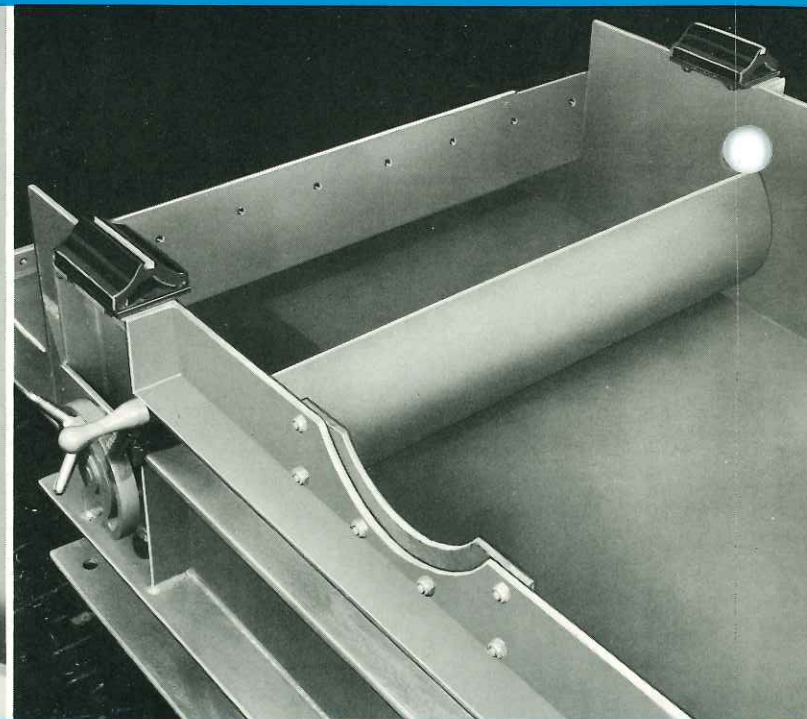
The stock flows into one end of the screen and is subjected to this intense but precisely controlled vibration while traveling over the scientifically

shaped screening area. One of its features is that it keeps the screening surface eighty per cent submerged.

The good, clean fibres pass through the screen plate openings while the rejects are rapidly and completely transported to the discharge end of the screen, impelled by the vibrating action on the specially contoured screening surface. The only actual contact the rejects have with the surface of the screen plate is at the point where the screen plate emerges from the stock. This section of the screen represents somewhat less than one-sixth the total screen area and its surface is virtually horizontal as well as dry. A shower



These sturdy, quick replaceable, resilient channel mounts stand up under long, hard service.



An exclusive feature of Jonsson Screen design is this semi-circular weir which is readily adjusted by a turn of the crank. The big wing nut adjacent to the crank handle makes it easy to lock the weir securely in the position that provides the correct level for optimum screen operation. Turning the weir upside down, so that the flat section faces the bottom, permits thorough, easy cleaning of the vat.



The knots are scoured clean before they leave the Jonsson Screen.

scours off the few remaining fibres that adhere to knots or rejects before they leave the screen. Loss of fibres in the rejects invariably proves insignificant.

Rapid discharge of rejects is a key factor in Jonsson Screen effectiveness. Knots, shives and foreign matter of any kind are given no opportunity to bounce around on the screen plates and get broken up into fine particles that get through and are so difficult to remove later on.

The speed with which the Jonsson Screen handles the stock is evidenced by the fact that 100 tons of pulp per day at .95% consistency, equal to 1750 gpm, passes through a Jonsson Screen with only 16 square feet of $\frac{1}{4}$ " perforate plate screening.

Overall advantages of Jonsson Screening

Here is a screen that handles large volumes of stock of relatively high consistency, delivering good, clean fibres with a minimum of loss in the rejects. Normal variations in volume or con-

sistency of the feed have no appreciable effect on its efficiency. Power cost is extraordinarily low — on the order of six hundredths HP per ton. Space requirements are small. Range of usefulness is large.

As a knoter on groundwood, sulphite, soda and sulphite pulps

The Jonsson Screen delivers 80 to 100 tons per day of $1\frac{1}{2}$ % sulphite, 150 tons or more of 2% groundwood or sulphate. Capacity depends somewhat, of course, on the type of stock, its freeness and the percentage of rejects in the stock. Both screening action and capacity are subject to precise control through adjustment of the *vibrating action*, the head of stock in the screen and the size and spacing of the screen perforations.

When conditions warrant, Jonsson Screens may be readily arranged in series with surplus stock overflowing to a following screen or screens equipped with finer screen openings as desired.

The knots leaving the Jonsson Screen are clean and whole, and are exceedingly free of fibre.

Jonsson Screens are the standard ahead of brown stock washers

The advantages of delivering brown stock to the washers free of knots and chips are well understood. Washing efficiency is very substantially increased. Maintenance of better, more uniform vacuum is assured. A material increase in black liquor recovery is effected. Savings in salt cake are frequently reported at ten cents or more per ton of pulp. Press rolls may be used on the washer drums to squeeze out the remaining black liquor because there is nothing in the stock to damage the filter wire. The stock is uniformly washed and ready to go directly to the primary screens. Rejected knots may be returned for further cooking or put through defibrators.

Yet, with all these benefits, knotting with black liquor was unheard of until the Jonsson Screen was applied to the job. A special submerged inlet is employed making it possible to convey the stock totally enclosed from the blowpit into the Jonsson Screen. Thus foam producing air is prevented from mixing with the stock. This, with

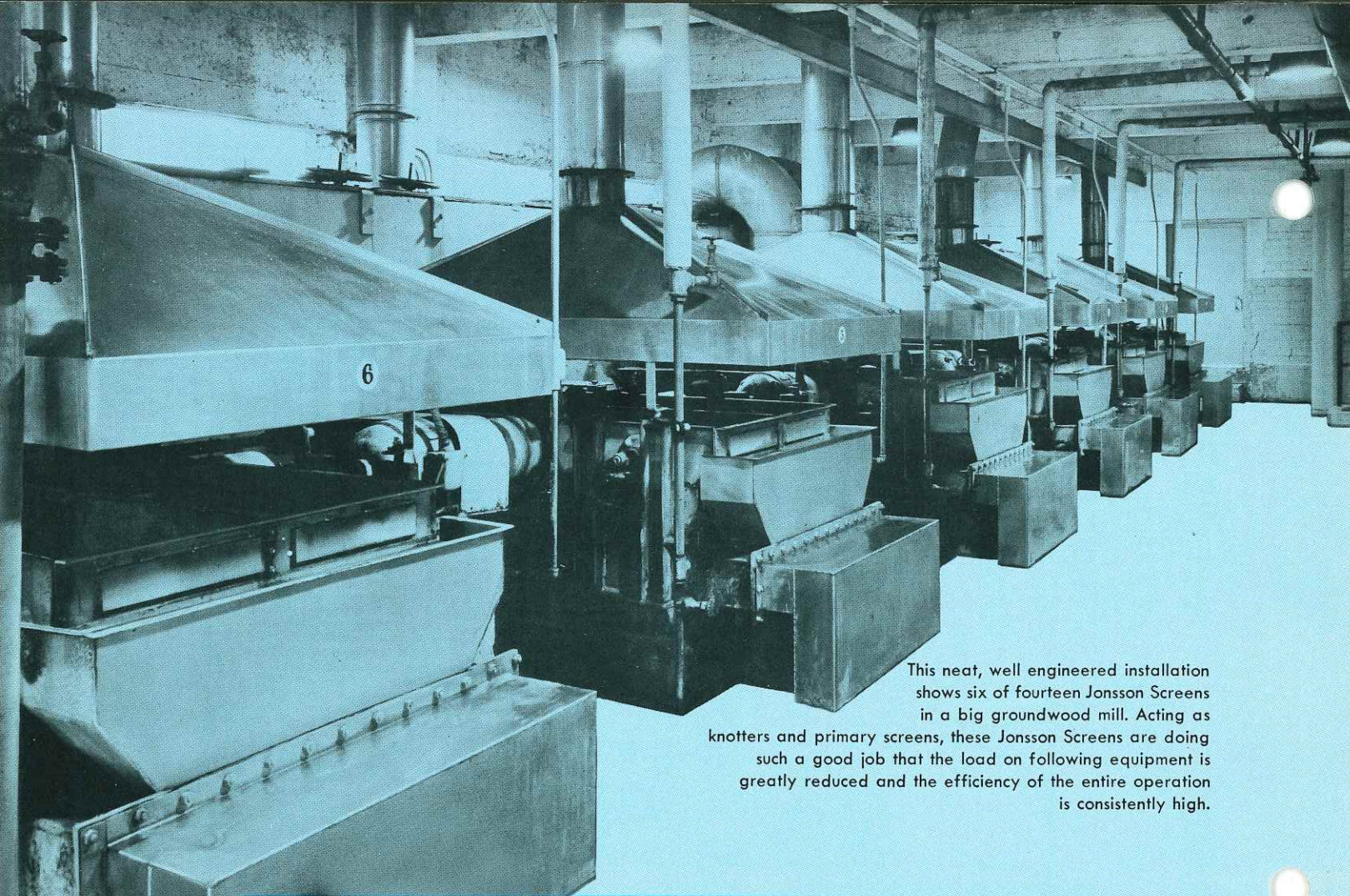
the Jonsson Screen's intense vibrating action and ability to handle high consistency stock, has done away with the foaming problem. Capacity is 125 to 150 tons per screen per day, using 3 HP or less. Today, thousands of tons of brown stock are being put through Jonsson Screens every 24 hours.

For bull screening

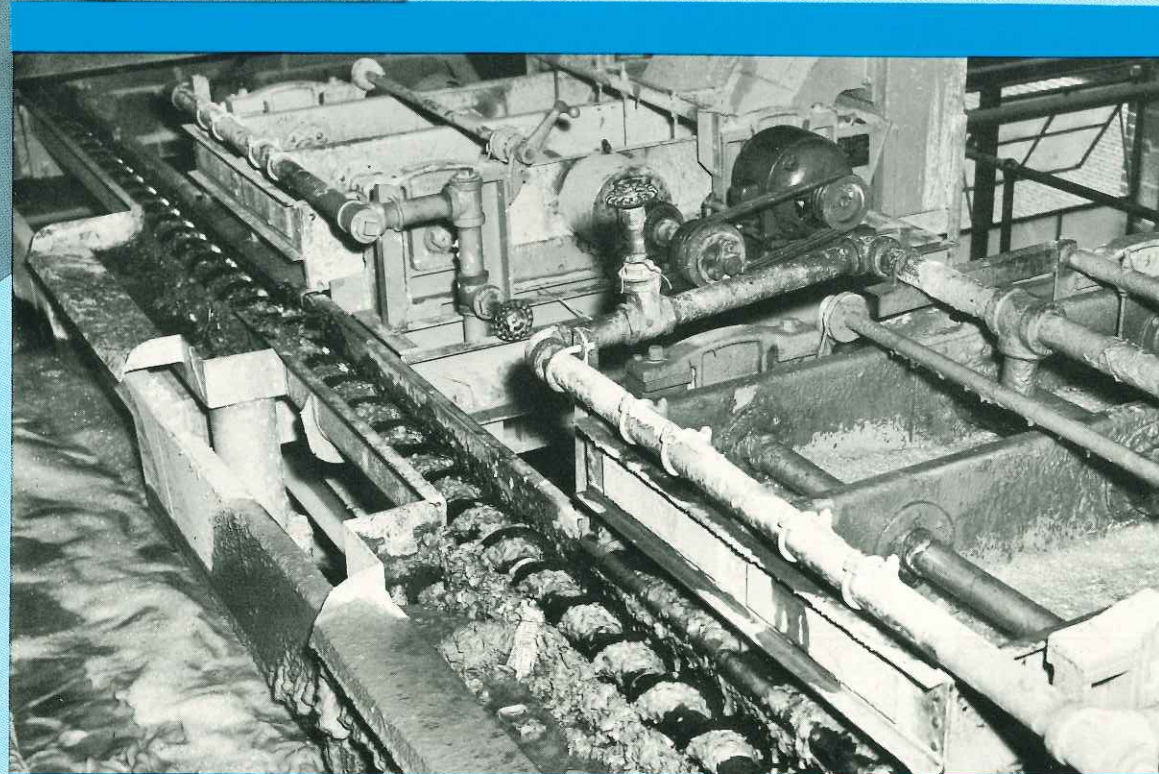
Groundwood knotting and coarse screening are best accomplished with the Jonsson Screen. More thorough screening and rejects free of good fibres are to be expected from their use. When the mill layout permits, bull screening and knotting can be combined to excellent advantage in the Jonsson Screen. It gets the long, narrow slivers that are so apt to appear in stock not put through Jonsson Screens.

For knotting and coarse screening building board stocks

Stock prepared by refiners, defibrators or masonite guns is screened in big volume with high efficiency and low power cost by Jonsson Screens.



This neat, well engineered installation shows six of fourteen Jonsson Screens in a big groundwood mill. Acting as knotters and primary screens, these Jonsson Screens are doing such a good job that the load on following equipment is greatly reduced and the efficiency of the entire operation is consistently high.



These Jonsson Screens are removing great quantities of unwanted matter from 100 tons per day of old paper stock that is being made into strong, durable paper pipe and conduit.

Coarseness of the stock and high freeness no longer offer the serious screening problems encountered before Jonsson Screens became available for this service. Employing selective screening, the accepted stock from the final screens is in many cases of sufficient quality to require no further refining. Rejects from the primary and secondary screens are returned for further treatment and rescreening.

The Jonsson Screen is now generally accepted as the preferred screen for board and filler stocks. It is now almost universally employed on strawboard. It does a superb job of taking out the knuckles, cockle burrs and any other material that will not go over the machine. Production is materially increased due to the ability to operate at higher machine speeds and with far fewer breaks. One big strawboard mill with Jonsson Screens ahead of each machine increased output 7½%. They used to experience as many as 18 breaks a day. Now 24 hours of uninterrupted production is not uncommon.

As a tailings screen

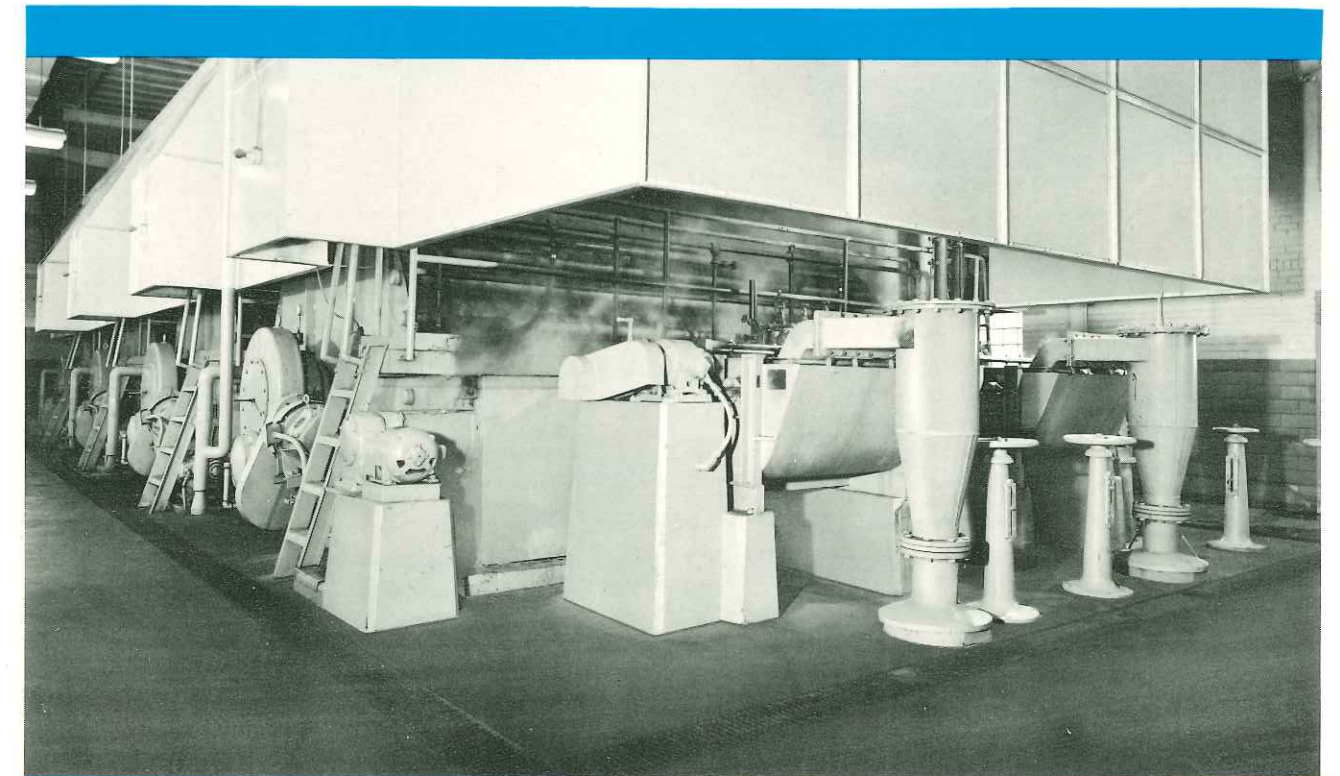
Jonsson Screens are proving ideal for handling tailings from any primary screening system and

are widely used for this purpose. A notable example is their application on tailings from Bird Centriscreens. Operated with fine perforations, they produce dry rejects and handle the tailings with maximum efficiency at lowest screening cost per ton.

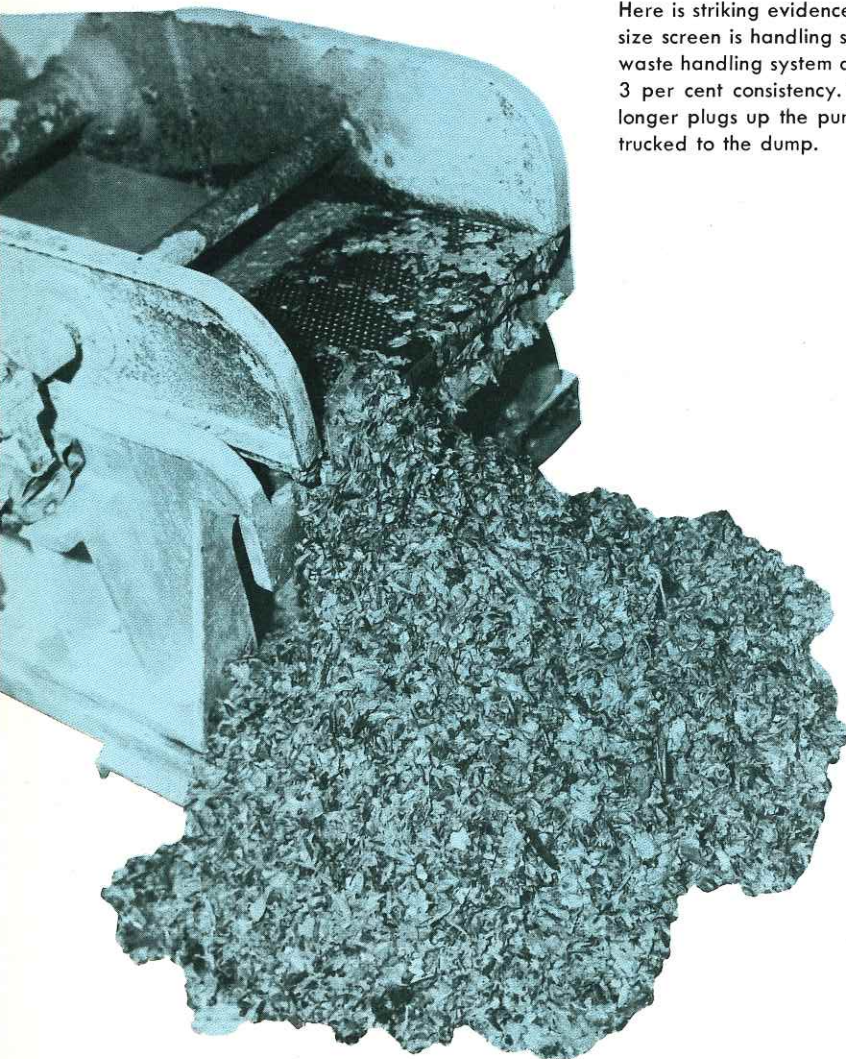
As a vital part of the modern deink system

Jonsson Screens are relied upon to take out the wet strength paper, cellophane, paper clips, rubber bands — all material that would otherwise clog the fine screens or damage paper machine wires, rolls and felts. They are commonly used after Bird Centriflitters and ahead of Bird Vibrotor slotted plate screens. Some mills operate them directly ahead of cylinder machines, one screen per mould.

In one mill a Jonsson Screen, putting through 90 tons per day of excessively dirty stock, paid for itself within 30 days out of the saving in paper machine wires and felts.



These Bird Jonsson Screens are delivering 250 tons per day of knot-free brown stock to a modern washing system. They protect washing efficiency and assure better maintenance of vacuum.



Here is striking evidence of the Jonsson Screen's ability and versatility. A test-size screen is handling some 140,000 gallons of sludge that settles in the mill's waste handling system after primary treatment. The sludge is screened at 2 to 3 per cent consistency. The screen effluent is pumped to disposal and it no longer plugs up the pumps. The rejects are removed by screw conveyor and trucked to the dump.

Pre-tested performance when desired

Whenever new or unusual screening problems present themselves, small, test size Jonsson Screens are available for the making of trial runs.

Bird Machine is screening headquarters

This company's unequalled resources of screen engineering, construction and experience are back of every Jonsson Screen installation and of its performance for as long as it remains in service. In every respect, the Bird Jonsson Screen measures up to Bird standards of quality, utility and value.

BIRD MACHINE COMPANY

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- Bird Save-Alls
- Bird Lime Mud Centrifugal
- Bird Vibrotor Screens
- Bird Cycleans
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